IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): In a frequency band, a method of intelligent frequency hopping, comprising:

generating a good window and a bad window;

determining a desired frequency type based on a frequency sequence;

using an original hopping sequence to sample an original frequency in the frequency band;

selecting the original frequency as an operating frequency when the original frequency is the desired frequency type; ~~and~~

mapping the original frequency to the desired frequency type when the original frequency is not the desired frequency type, wherein generating comprises:

determining a number of good channels and a number of bad channels in the frequency band;

defining a ratio of good channels to bad channels as a ratio, Q (the ratio); and

defining a good window size as the number of good channels, defining a bad window size as the number of bad channels, such that a ratio of the good window size to the bad window size is Q.

Claim 2 (Previously Presented): The method of claim 1 further comprising: using a frequency from the good window when the original frequency is not the desired frequency type, and the desired frequency type is a good frequency.

Claim 3 (Previously Presented): The method of claim 1 further comprising using a frequency from the bad window when the original frequency is not the desired frequency type and the desired frequency type is a bad frequency.

Claim 4 (Canceled).

Claim 5 (Original): The method of claim 1 wherein the frequency sequence is defined as a number of channels of a first type, followed by a number of channels of a second type, such that the ratio of the number of channels of the first type to the number of channels of the second type is Q.

Claim 6 (Original): The method of claim 1 wherein the frequency sequence is defined as a number of channels of a first type, followed by a number of channels of a second type, such that the ratio of the number of channels of the first type to the number of channels of the second type is 1/Q.

Claim 7 (Previously Presented): The method of claim 5 wherein the first type is a good channel and the second type is a bad channel.

Claim 8 (Previously Presented): The method of claim 6 wherein the first type is a bad channel and the second type is a good channel.

Claim 9 (Previously Presented): The method of claim 1 further comprising:

sampling a plurality of channels in the frequency band;

identifying each channel in the plurality of channels as a good channel or a bad channel as a function of a predetermined factor; and

assigning the good channels to the good window and the bad channels to the bad window.

Claim 10 (Original): The method of claim 1 wherein sampling the plurality of channels samples all channels available to a network.

Claim 11 (Currently Amended): The method of claim [[4]] **1** wherein the good channel is defined as a channel having at least a predetermined Quality Level of Service.

Claim 12 (Currently Amended): The method of claim [[4]] **1** wherein the bad channel is defined as a channel having less than a predetermined Quality Level of Service.

Claim 13 (Previously Presented): The method of claim 1 wherein each of the good and bad windows has an even number of slots to which channels may be assigned.

Claim 14 (Currently Amended): The method of claim [[4]] **1** further comprising an act of assigning a first size to the good window, and a second size to the bad window, such that the ratio of the size of the good window to the size of the bad window is approximately the same as the ratio of a number of the good channels in the band to a number of the bad channels in the frequency band (the ratio) over time.

Claim 15 (Currently Amended): The method of claim [[4]] **1** further comprising detecting a good channel, and ignoring the good channel when the bad window is being generated.

Claim 16 (Previously Presented): The method of claim 2 wherein using a frequency comprises:

using all channels in the good window before using any channel in the bad window.

Claim 17 (Previously Presented): In a frequency band, a method of intelligent frequency hopping, comprising:

identifying each channel in the frequency band as a good channel or a bad channel;

determining a ratio of a number of the good channels to a number of the bad channels (the ratio);

assigning a first size to a good window, and a second size to a bad window, such that the ratio of the size of the good window to the size of the bad window is the same as the ratio;

assigning the good channels to the good window and the bad channels to the bad window;

determining a desired frequency type based on a frequency sequence;

using an original hopping sequence to sample an original frequency in the frequency band; and

selecting the original frequency as an operating frequency when the original frequency is the desired frequency type.

Claim 18 (Original): The method of claim 17 wherein the frequency sequence is defined as a number of channels of a first type, followed by a number of channels of a second type, such that the ratio of the number of channels of the first type to the number of channels of the second type is Q.

Claim 19 (Previously Presented): The method of claim 17 further comprising transmitting an idle signal when the bad channel is selected.

Claim 20 (Previously Presented): In a frequency band, a method of intelligent frequency hopping, comprising:

in the frequency band, determining a ratio of a number of good channels to a number of bad channels (the Q ratio);

assigning a first size to a good window, and a second size to a bad window, such that a ratio of the size of the good window to the size of the bad window is the same as the Q ratio;

defining a frequency sequence as a number of channels of a first type, followed by a number of channels of a second type, such that a ratio of the number of channels of the first type to a number of channels of the second type is the Q ratio;

using an original hopping sequence to sample an original frequency in the frequency band;

selecting the original frequency as an operating frequency when the original frequency is a desired frequency type; and

using a frequency from either the good window or the bad window as an operating frequency when the original frequency is not the desired frequency type.